Claims 2-14, 16-28, 30-42 and 44-54 were pending. Applicants cancelled claims 5, 19, 33 and 47 without prejudice or disclaimer. Hence, claims 2-4, 6-14, 16-18, 20-28, 30-32, 34-42, 44-46 and 48-54 are pending. Applicants reserve the right to file a continuation application to capture the subject matter of cancelled claims 5, 19, 33 and 47.

Claims 5, 19, 33 and 47 are rejected under 35 U.S.C. §102(b). Claims 2-4, 6-14, 16-18, 20-28, 30-32, 34-42, 44-46 and 48-54 are rejected under 35 U.S.C. § 103(a). Applicants respectfully traverse these rejections for at least the reasons stated below and respectfully request that the Examiner reconsider and withdraw these rejections.

I.   REJECTIONS UNDER 35 U.S.C. §102(b):

The Examiner has rejected claims 5, 19, 33 and 47 under 35 U.S.C. § 102(b) as being anticipated by Gopal et al. (*Multicasting Groups Over Broadcast Channels, IEEE*, July 1994, pages 2423-2431) (hereinafter "Gopal"). Applicants cancelled claims 5, 19, 33 and 47, and hence the rejections to claims 5, 19, 33 and 47 under 35 U.S.C. § 102(b) as being anticipated by Gopal are moot.

II.   REJECTIONS UNDER 35 U.S.C. §103(a):

The Examiner has rejected claims 4, 13, 14, 18, 27, 28, 32, 41, 42 and 46 under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum ("Computer Networks," Pages 190-219, Prentice-Hall, 3'd Edition, 1996) (hereinafter "Tanenbaum"). The Examiner has further rejected claims 9-11, 23-25, 37-39 and 51-53 under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopel et al. ("Point-to-Multipoint Communication over Broadcast Links, IEEE, September 1984, pages 1034-1044) (hereinafter "Gopal'84"). The Examiner has further rejected claims 12, 26, 40 and 54 under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and in further view of Tanenbaum. The Examiner has further rejected claims 6, 7, 20, 21, 34, 35, 48 and 49 under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and in further view of Kawan et al.

(U.S. Patent No. 5,572,572) (hereinafter "Kawan"). The Examiner has further rejected claims 8, 22, 36 and 50 under U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and in further view of Bennett et al. (U.S. Publication No. 2005/0021832) (hereinafter "Bennett"). The Examiner has further rejected claims 2, 16, 30 and 44 under U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum and in further view of Kalkunte et al. (U.S. Publication No. 2003/0118016) (hereinafter "Kalkunte"). The Examiner has further rejected claims 3, 17, 31 and 45 under U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum and Kalkunte and in further view of Bennett. Applicants respectfully traverse these rejections for at least the reasons stated below and respectfully request that the Examiner reconsider and withdraw these rejections.

A. Claims 4, 13, 14, 18, 27, 28, 32, 41, 42 and 46 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum.

1. Gopal in view of Tanenbaum do not teach or suggest the following claim limitations of claims 13, 14, 27, 28, 41 and 42.

Applicants respectfully assert that Gopal and Tanenbaum, taken singly or in combination, do not teach or suggest "retransmitting said frame to said particular destination node of said two or more destination nodes" as recited in claim 13 and similarly in claims 27 and 41. The Examiner cites page 2425, column 1, lines 27-25 of Gopal as teaching the above-cited claim limitation. Office Action (6/28/2006), page 4. Applicants respectfully traverse and assert that Gopal instead teaches retransmitting the message to all destinations when the transmitter realizes that a message was not received by all the destinations. Page 2525, column 1, lines 27-35. Gopal does not teach retransmitting a frame to a particular destination node of the two or more destination nodes, where a request was received from the particular destination node to retransmit the frame. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 13, 27 and 41, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

In response to Applicants' above argument, the Examiner asserts that column 1, lines 27-35 of Gopal teaches that its multicast source has the ability to transmit to any subset of the larger destination set. Office Action (6/28/2006), page 25. There is no language in column 1, lines 27-35 of Gopal that supports such a supposition (i.e., there is no language in column 1, lines 27-35 of Gopal that teaches retransmitting the message to a subset of the larger destination set). Further, the Examiner must consider all words in a claim (retransmitting a frame <u>to a particular destination node</u> of the two or more destination nodes, where a <u>request was received from the particular destination node to retransmit the frame</u>) in judging the patentability of claims 13, 27 and 41. The Examiner has ignored the language that states that a frame is retransmitted to a particular destination node where a request was received from that particular destination node to retransmit the frame. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 13, 27 and 41. M.P.E.P. §2143.

Claims 14, 28 and 42 each recite combinations of features of claims 13, 27 and 41, respectively, and thus are patentable over Gopal in view of Tanenbaum for at least the above-stated reasons.

2. <u>The Examiner's motivation for modifying Gopal with Tanenbaum to include the missing claim limitations of claims 4, 18, 32 and 46 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 4, 18, 32 and 46.</u>

Most if not all inventions arise from a combination of old elements. See *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Therefore, an Examiner may often find every element of a claimed invention in the prior art. *Id.* However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See Id.* In order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references

for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach saving a copy of the transmitted frame, as recited in claim 4 and similarly in claims 18, 32 and 46. Office Action (6/28/2006), page 4. The Examiner asserts that Tanenbaum teaches the above-cited claim limitation. Office Action (6/28/2006), page 4. The Examiner modifies Gopal with Tanenbaum to include the above-cited claim limitation in order "to provide reliable data transmission in a transmission medium with a high bit error rate and to achieve this goal the transmitter needs to remember all of the packets it has transmitted by saving a copy and the need to detect the errors is addressed by the receivers request for transmission after identifying errors at the receiver." Office Action (6/28/2006), pages 4-5. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 4, 18, 32 and 46.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to provide reliable data transmission in a transmission medium with a high bit error rate and to achieve this goal the transmitter needs to remember all of the packets it has transmitted by saving a copy and the need to detect the errors is addressed by the receivers request for transmission after identifying errors at the receiver" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Applicants respectfully request the Examiner to

point out which of these sources is the source of the Examiner's motivation[1]. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 4, 18, 32 and 46. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to save a copy of the transmitted frame (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate and to achieve this goal the transmitter needs to

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[1] Applicants feel it is very important for the Examiner to point out the source of the Examiner's motivation because it appears to Applicants that the Examiner is relying upon his own subjective opinion. The reason why the Federal Circuit (*In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2000)) has required the Examiner to provide objective evidence is because it may be easy to conclude that it would be obvious to combine references using hindsight reasoning even though there is no motivation or suggestion to do so. One can usually find a reason to combine references or make modifications to the main reference. If that were all it took, then all inventions would be obvious. For example, assuming that a wheelbarrow had never been developed and a patentee had claimed a wheelbarrow, if the main reference taught a cart with a shallow box body, and the secondary reference taught two wheels, the Examiner could simply assert, using hindsight reasoning without providing objective evidence, that the motivation for combining the two references is so that the cart could be moved from place to place. Hence, the patentee could not obtain a patent on the wheelbarrow (even though one has never been developed) based on the Examiner's rationale for combining the references. Yet the Examiner has not provided any evidence that a person of ordinary skill in the art would have combined the references to make such a product. In hindsight, everything is obvious. It seems that a question that should be asked is why the invention (in this example a wheelbarrow) was not already developed. If it is so obvious, then it would seem it already would have been developed.

remember all of the packets it has transmitted by saving a copy and the need to detect the errors is addressed by the receivers request for transmission after identifying errors at the receiver") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to save a copy of the transmitted frame (missing claim limitation) be to provide reliable data transmission in a transmission medium with a high bit error rate? There are many different modifications that can be made to Gopal's invention to provide reliable data transmission. Why in particular would one skilled in the art want to modify Gopal to save a copy of the transmitted frame? Gopal's purpose is not to improve the reliability of the data transmission in a transmission medium with a high bit error rate. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 4, 18, 32 and 46. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 4, 18, 32 and 46. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate and to achieve this goal the transmitter needs to remember all of the packets it has transmitted by saving a copy and the need to detect the errors is addressed by the receivers request for transmission after identifying errors at the receiver"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Tanenbaum. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 4, 18, 32 and 46. *Id.*

3.   The Examiner's motivation for modifying Gopal to receive a request to retransmit the frame from a particular destination node of the two or more destination nodes, as recited in claims 13, 27 and 41, is insufficient to establish a *prima facie* case of obviousness in rejecting claims 13, 14, 27, 28, 41 and 42.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach receiving a request to retransmit the frame from a particular destination node of the two or more destination nodes, as recited in claim 13 and similarly in claims 27 and 41. Office Action (6/28/2006), page 4. The Examiner asserts that Tanenbaum teaches the above-cited claim limitation. Office Action (6/28/2006), page 4. The Examiner's motivation for modifying Gopal with Tanenbaum to include the above-cited claim limitation is "to provide reliable data transmission in a transmission medium with a high bit error rate and to achieve this goal the transmitter needs to remember all of the packets it has transmitted by saving a copy and the need to detect the errors is addressed by the receivers request for transmission after identifying errors at the receiver." Office Action (6/28/2006), pages 4-5. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 13, 14, 27, 28, 41 and 42.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to provide reliable data transmission in a transmission medium with a high bit error rate

and to achieve this goal the transmitter needs to remember all of the packets it has transmitted by saving a copy and the need to detect the errors is addressed by the receivers request for transmission after identifying errors at the receiver" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). <u>Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation</u>. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 13, 14, 27, 28, 41 and 42. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to receive a request to retransmit the frame from a particular destination node of the two or more destination nodes (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate and to achieve this goal the transmitter needs to remember all of the packets it has transmitted by saving a copy and the need to detect the errors is addressed by the receivers request for transmission after identifying errors at the receiver") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of

destinations actually in communication with the source, to receive a request to retransmit the frame from a particular destination node of the two or more destination nodes (missing claim limitation) be to provide reliable data transmission in a transmission medium with a high bit error rate? There are many different modifications that can be made to Gopal's invention to provide reliable data transmission. Why in particular would one skilled in the art want to modify Gopal to receive a request to retransmit the frame from a particular destination node of the two or more destination nodes? Gopal's purpose is not to improve the reliability of the data transmission in a transmission medium with a high bit error rate. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 13, 27 and 41. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 13, 14, 27, 28, 41 and 42. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate and to achieve this goal the transmitter needs to remember all of the packets it has transmitted by saving a copy and the need to detect the errors is addressed by the receivers request for transmission after identifying errors at the receiver"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Tanenbaum. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 13, 14, 27, 28, 41 and 42. *Id*.

B. Claims 9-11, 23-25, 37-39 and 51-53 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84.

1. Gopal and Gopal'84, taken singly or in combination, do not teach or suggest the following claim limitations.

Applicants respectfully assert that Gopal and Gopal'84, taken singly or in combination, do not teach or suggest "reading a data structure associated with said frame associated with said acknowledgment" as recited in claim 9 and similarly in claims 23, 37 and 51. The Examiner states that it is inherent for Gopal to read a data structure associated with a frame associated with an acknowledgment. Office Action (6/28/2006), page 6. Applicants respectfully traverse.

Gopal teaches that acknowledgments are sent for every message upon its acceptance as well as for the most recently accepted message. Page 2425. However, the Examiner has not presented any evidence for a person of ordinary skill in the art to conclude that sending acknowledgments necessarily concludes the teaching of reading a data structure associated with a frame associated with the acknowledgment. The Examiner must provide a basis in fact and/or technical reasoning to support that assertion that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment, and that it be so recognized for persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 51. M.P.E.P. §2143.

In response to Applicants' above argument, the Examiner asserts that on lines 49-51 on page 2425 of Gopal teach that when a message is acknowledged, the history of the recipients of that message is deleted. Office Action (6/28/2006), page 25. The Examiner then concludes that this language teaches reading a data structure. Office Action (6/28/2006), page 25. While a data structure may be read, the above-cited

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claim limitation recites reading a data structure <u>associated with a frame</u> associated with the acknowledgment. There is no language in lines 49-51 on page 2425 of Gopal that suggests reading a data structure <u>associated with a frame</u> where the frame is associated with the acknowledgment. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 51, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicants further assert that Gopal and Gopal'84, taken singly or in combination, do not teach or suggest "identifying said particular destination node; identifying a frame associated with said acknowledgment; and indicating in an entry in said data structure associated with said particular destination node that a frame associated with said acknowledgment from said particular destination node has been received" as recited in claim 9 and similarly in claims 23, 37 and 51. The Examiner cites Figure 5 and section 3 on page 1036 of Gopal'84 as teaching the above-cited claim limitation. Office Action (6/28/2006) pages 6-7. Applicants respectfully traverse and assert that Gopal'84 instead teaches that the "full memory go-back-n" protocol updates the ack_outstanding list different from the previously two protocols. Section 3, page 1036. Gopal'84 further teaches that upon receipt of an acknowledgment for a message from a receiver, that receiver is only removed from the ack_outstanding list if it is not on the ack_outstanding list of any previous message. Section 3, page 1036. Gopal'84 further teaches that this extra check ensures that the messages arrive in sequence at the receivers. Section 3, page 1036. Gopal'84 further teaches that it is made necessary by the fact that the receivers generate acknowledgments for certain messages that are subsequently discarded. Section 3, page 1036. Gopal'84 further teaches that as in the previous two protocols, when the time-out counter for a message expires, the transmitter goes back and retransmits the unsuccessful message and all messages subsequent to it. Section 3, page 1036.

There is no language in the cited passage that teaches identifying a particular destination node. Neither is there any language in the cited passage that teaches

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identifying a frame associated with an acknowledgment. Neither is there any language in the cited passage that teaches indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 51, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

> 2. The Examiner's motivation in modifying Gopal with Gopal'84 to include the missing claim limitations of claims 9, 23, 37 and 51 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 51.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach identifying the particular destination node; identifying a frame associated with the acknowledgment; and indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received, as recited in claim 9 and similarly in claims 23, 37 and 51. Office Action (6/28/2006), page 6. The Examiner asserts that Gopal'84 teaches the above-cited claim limitations. Office Action (6/28/2006), pages 6-7. The Examiner's

motivation for modifying Gopal with Gopal'84 to include the above-cited claim limitation is "to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error." Office Action (6/28/2006), page 7. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 52.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 9, 23, 37 and 52. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to (1) identify the

particular destination node; (2) identify a frame associated with the acknowledgment; and (3) indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received (Examiner admits that Gopal does not teach these limitation). The Examiner's motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to (1) identify the particular destination node; (2) identify a frame associated with the acknowledgment; and (3) indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received (missing claim limitations) be to provide reliable data transmission in a transmission medium with a high bit error rate? There are many different modifications that can be made to Gopal's invention to provide reliable data transmission. Why in particular would one skilled in the art want to modify Gopal to (1) identify the particular destination node; (2) identify a frame associated with the acknowledgment; and (3) indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received? Gopal's purpose is not to improve the reliability of the data transmission in a transmission medium with a high bit error rate. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 9, 23, 37 and 52. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 9, 23, 37 and 52. *In re Rouffet,* 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Gopal'84. However, the mere fact that references _can_ be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 9, 23, 37 and 52. *Id.*

> 3. The Examiner's motivation in modifying Gopal with Gopal84' to incorporate the missing claim limitations of claims 10, 24, 38 and 52 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 10, 24, 38 and 52.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach determining if there are outstanding responses for the frame associated with the acknowledgment, as recited in claim 10 and similarly in claims 24, 38 and 52. Office Action (6/28/2006), page 8.

The Examiner asserts that Gopal'84 teaches the above-cited claim limitation. Office Action (6/28/2006), pages 8-9. The Examiner's motivation for modifying Gopal with Gopal'84 to include the above-cited claim limitation is "to provide reliable data transmission sequentially in a transmission medium with a high bit error rate such that the transmitter and receiver will not be out of synch in the exchange of acknowledgment messages." Office Action (6/28/2006), page 9. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 10-11, 24-25, 38-39 and 52-53.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to provide reliable data transmission sequentially in a transmission medium with a high bit error rate such that the transmitter and receiver will not be out of synch in the exchange of acknowledgment messages" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 10-11, 24-25, 38-39 and 52-53. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to determine if

there are outstanding responses for the frame associated with the acknowledgment (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation ("to provide reliable data transmission sequentially in a transmission medium with a high bit error rate such that the transmitter and receiver will not be out of synch in the exchange of acknowledgment messages") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to determine if there are outstanding responses for the frame associated with the acknowledgment (missing claim limitation) be to provide reliable data transmission sequentially in a transmission medium with a high bit error rate? There are many different modifications that can be made to Gopal's invention to provide reliable data transmission. Why in particular would one skilled in the art want to modify Gopal to determine if there are outstanding responses for the frame associated with the acknowledgment? Gopal's purpose is not to improve the reliability of the data transmission sequentially in a transmission medium with a high bit error rate. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 10, 24, 38 and 52. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 10-11, 24-25, 38-39 and 52-53. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to provide reliable data transmission sequentially in a transmission medium with a high bit error rate such that the transmitter and receiver will not be out of synch in the exchange of acknowledgment messages"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Gopal'84. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation

is insufficient to support a *prima facie* case of obviousness in rejecting claims 10-11, 24-25, 38-39 and 52-53. *Id.*

> 4. The Examiner's motivation for modifying Gopal with Gopal'84 to include the missing claim limitations of claims 11, 25, 39 and 53 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 11, 25, 39 and 53.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach waiting to receive an additional acknowledgment if there are outstanding responses for the frame associated with the acknowledgment, as recited in claim 11 and similarly in claims 25, 39 and 53. Office Action (6/28/2006), page 9. The Examiner asserts that Gopal'84 teaches the above-cited claim limitation. Office Action (6/28/2006), page 9. The Examiner's motivation for modifying Gopal with Gopal'84 to include the above-cited claim limitation is "to provide reliable data transmission sequentially in a transmission medium with a high bit error rate such that the transmitter and receiver will not be out of synch in the exchange of acknowledgment messages." Office Action (6/28/2006), page 9. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 11, 25, 39 and 53.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to

provide reliable data transmission sequentially in a transmission medium with a high bit error rate such that the transmitter and receiver will not be out of synch in the exchange of acknowledgment messages" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 11, 25, 39 and 53. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to receive an additional acknowledgment if there are outstanding responses for the frame associated with the acknowledgment (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation ("to provide reliable data transmission sequentially in a transmission medium with a high bit error rate such that the transmitter and receiver will not be out of synch in the exchange of acknowledgment messages") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to receive an additional acknowledgment if there are outstanding responses for the frame associated with the

acknowledgment (missing claim limitation) be to provide reliable data transmission sequentially in a transmission medium with a high bit error rate? There are many different modifications that can be made to Gopal's invention to provide reliable data transmission. Why in particular would one skilled in the art want to modify Gopal to receive an additional acknowledgment if there are outstanding responses for the frame associated with the acknowledgment? Gopal's purpose is not to improve the reliability of the data transmission sequentially in a transmission medium with a high bit error rate. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 11, 25, 39 and 53. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims c. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to provide reliable data transmission sequentially in a transmission medium with a high bit error rate such that the transmitter and receiver will not be out of synch in the exchange of acknowledgment messages"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Gopal'84. However, the mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 11, 25, 39 and 53. *Id.*

      C.   <u>Claims 12, 26, 40 and 54 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and Tanenbaum.</u>

           1.   <u>Gopal, Gopal'84 and Tanenbaum, taken singly or in combination, do not teach or suggest the claim limitation of claims 12, 26, 40 and 54.</u>

Applicants respectfully assert that Gopal, Gopal'84 and Tanenbaum, taken singly or in combination, do not teach or suggest "wherein if there are no outstanding responses for said frame then the method further comprises the step of: releasing memory associated with said frame associated with said acknowledgment" as recited in claim 12 and similarly in claims 26, 40 and 54. The Examiner cites page 204, lines 11-16 and the last paragraph on page 212 of Tanenbaum as teaching the above-cited claim limitation. Office Action (6/28/2006), page 11. Applicants respectfully traverse and assert that Tanenbaum instead teaches that since frames currently within the sender's window may ultimately be lost or damaged in transit, the sender must keep all these frames in its memory for possible retransmission. Page 204, lines 11-13. Tanenbaum further teaches that although protocol 5 does not buffer the frames arriving after an error, it does not escape the problem of buffering altogether. Last paragraph, page 212. There is no language in the cited passages that teaches releasing memory associated with a frame. Neither is there any language in the cited passages that teaches releasing memory associated with a frame associated with an acknowledgment. Neither is there any language in the cited passages that teaches releasing memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 12, 26, 40 and 54, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

In response to Applicants' above argument, the Examiner asserts that Tanenbaum teaches the above-cited claim limitation on page 212 by indicating that buffers are released when acknowledgment packets are received. Office Action (6/28/2006), page 26. Applicants respectfully traverse. Again, the Examiner is ignoring claim language. The Examiner must consider all words in a claim, e.g., "if there are no outstanding responses for the frame then…releasing memory associated with a frame associated with the acknowledgment," in judging the patentability of claims 18 and 40 against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); M.P.E.P. §2143.03. Applicants are not simply

claiming releasing memory. Therefore, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 18 and 40. M.P.E.P. §2143.

> 2. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 12, 26, 40 and 54.

As stated above, most if not all inventions arise from a combination of old elements. *See In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Obviousness is determined from the vantage point of a hypothetical person having ordinary skill in the art to which the patent pertains. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1457 (Fed. Cir. 1998). Therefore, an Examiner may often find every element of a claimed invention in the prior art. *Id*. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. *See Id*. In order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach releasing memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame, as recited in claim 12 and similarly in claims 26, 40 and 54. Office Action (6/28/2006), page 10. The Examiner modifies Gopal with Tanenbaum to include the above-cited claim limitation "to increase the throughput and operational speed of a network involved in forwarding data sequentially with reliability given the need for the transmitting side to save copy of data packets sent and the limited

memory size available for such operation, removing acknowledged data frames and releasing buffer associated with the frames increases traffic on the network." Office Action (6/28/2006), page 11. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 12, 26, 40 and 54.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to increase the throughput and operational speed of a network involved in forwarding data sequentially with reliability given the need for the transmitting side to save copy of data packets sent and the limited memory size available for such operation, removing acknowledged data frames and releasing buffer associated with the frames increases traffic on the network" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 12, 26, 40 and 54. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to release memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame (Examiner admits that Gopal does not teach this

limitation). The Examiner's motivation ("to increase the throughput and operational speed of a network involved in forwarding data sequentially with reliability given the need for the transmitting side to save copy of data packets sent and the limited memory size available for such operation, removing acknowledged data frames and releasing buffer associated with the frames increases traffic on the network") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to release memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame (missing claim limitation) be to increase the throughput and operational speed of a network? There are many different modifications that can be made to Gopal's invention to increase the throughput and operational speed of a network. Why in particular would one skilled in the art want to modify Gopal to release memory associated with a frame associated with an acknowledgment if there are no outstanding responses for the frame? Gopal's purpose is not to increase the throughput and operational speed of a network. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 12, 26, 40 and 54. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 12, 26, 40 and 54. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to increase the throughput and operational speed of a network involved in forwarding data sequentially with reliability given the need for the transmitting side to save copy of data packets sent and the limited memory size available for such operation, removing acknowledged data frames and releasing buffer associated with the frames increases traffic on the network"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Tanenbaum. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the

desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 12, 26, 40 and 54. *Id.*

        D.   Claims 6, 7, 20, 21, 34, 35, 48 and 49 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and Kawan.

             1.   Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest the following claim limitations.

Applicants respectfully assert that Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest "identifying said particular destination node; identifying a frame associated with said acknowledgment" as recited in claim 6 and similarly in claims 20, 34 and 48. The Examiner cites Figure 5 of Gopal'84 as teaching the above-cited claim limitation. Office Action (6/28/2006), page 13. Applicants respectfully traverse and assert that Gopal'84 instead teaches that the "full memory go-back-n" protocol updates the ack_outstanding list different from the previously two protocols. Section 3, page 1036. Gopal'84 further teaches that upon receipt of an acknowledgment for a message from a receiver, that receiver is only removed from the ack_outstanding list if it is not on the ack_outstanding list of any previous message. Section 3, page 1036. Gopal'84 further teaches that this extra check ensures that the messages arrive in sequence at the receivers. Section 3, page 1036. Gopal'84 further teaches that it is made necessary by the fact that the receivers generate acknowledgments for certain messages that are subsequently discarded. Section 3, page 1036. Gopal'84 further teaches that as in the previous two protocols, when the time-out counter for a message expires, the transmitter goes back and retransmits the unsuccessful message and all messages subsequent to it. Section 3, page 1036.

There is no language in the cited passage that teaches identifying a particular destination node. Neither is there any language in the cited passage that teaches identifying a frame associated with an acknowledgment. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48,

since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicants further assert that Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest "reading a data structure associated with said frame associated with said acknowledgment" as recited in claim 6 and similarly in claims 20, 34 and 48. The Examiner states that it is inherent for Gopal to read a data structure associated with a frame associated with an acknowledgment. Office Action (6/28/2006), page 12. Applicants respectfully traverse.

Gopal teaches that acknowledgments are sent for every message upon its acceptance as well as for the most recently accepted message. Page 2425. However, the Examiner has not presented any evidence for a person of ordinary skill in the art to conclude that sending acknowledgments necessarily concludes the teaching of reading a data structure associated with a frame associated with the acknowledgment. The Examiner must provide a basis in fact and/or technical reasoning to support that assertion that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment, and that it be so recognized for persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48. M.P.E.P. §2143.

Applicants further assert that Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest "determining if a sequence number associated with said acknowledgment is greater than an expected sequence number" as recited in claim 6 and similarly in claims 20, 34 and 48. The Examiner cites column 21, lines 7-21 of Kawan as teaching the above-cited claim limitation. Office Action (6/28/2006), page 15. Applicants respectfully traverse and assert that Kawan instead teaches that if the transmitting device has stored one or more messages which higher

sequence numbers than the last received acknowledgment number, those messages with a greater sequence number are retransmitted. Column 21, lines 11-14. Kawan further teaches that when an acknowledgment number is received, all stored messages having sequence numbers less than or equal to the last received acknowledgment are discarded. Column 21, lines 14-17. Hence, Kawan does not teach <u>determining</u> if a <u>sequence number</u> associated with an acknowledgment is greater than an expected <u>sequence number</u>. Instead, Kawan simply teaches performing one of two tasks (discarding or retransmitting messages) based on the received sequence number. Kawan does not teach determining whether the received sequence number is a particular sequence number as expected. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Applicants further assert that Gopal, Gopal'84 and Kawan, taken singly or in combination, do not teach or suggest "wherein if said sequence number associated with said acknowledgment is greater than said expected sequence number then the method further comprises the step of: detecting a lost acknowledgment" as recited in claim 7 and similarly in claims 21, 35 and 49. The Examiner cites column 21, lines 7-21 of Kawan as teaching the above-cited claim limitation. Office Action (6/28/2006), page 16. Applicants respectfully traverse and assert that Kawan instead teaches that if the transmitting device has stored one or more messages which higher sequence numbers than the last received acknowledgment number, those messages with a greater sequence number are retransmitted. Column 21, lines 11-14. Kawan further teaches that when an acknowledgment number is received, all stored messages having sequence numbers less than or equal to the last received acknowledgment are discarded. Column 21, lines 14-17. Hence, Kawan does not teach detecting a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number. Instead, Kawan simply teaches performing one of two tasks (discarding or retransmitting messages) based on the received sequence number. Kawan does not teach determining whether the received sequence number is a particular sequence number as expected. Hence, Kawan does

not teach detecting a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 7, 21, 35 and 49, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

> 2. The Examiner's motivation for modifying Gopal and Gopal'84 with Kawan to incorporate the missing claim limitations of claims 6, 20, 34 and 48 is insufficient to establish a *prima facie* case of obviousness.

As stated above, a *prima facie* showing of obviousness requires the Examiner to establish, inter alia, that the prior art references teach or suggest, either alone or in combination, all of the limitations of the claimed invention, and the Examiner must provide a motivation or suggestion to combine or modify the prior art reference to make the claimed inventions. M.P.E.P. §2142. The showings must be clear and particular and supported by objective evidence. *In re Lee*, 277 F.3d 1338, 1343, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 217 F.3d 1365, 1370, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000); *In re Dembiczak*, 50 U.S.P.Q.2d. 1614, 1617 (Fed. Cir. 1999). Broad conclusory statements regarding the teaching of multiple references, standing alone, are not evidence. *Id.*

The Examiner admits that Gopal and Gopal'84 do not teach determining if a sequence number associated with the acknowledgment is greater than an expected sequence number, as recited in claim 6 and similarly in claims 20, 34 and 48. Office Action (6/28/2006), page 12. The Examiner asserts that Gopal'84 teaches the above-cited claim limitation. Office Action (6/28/2006), page 15. The Examiner modifies Gopal with Kawan to include the above-cited claim limitation "to provide reliable data transmission in a transmission medium with a high bit error rate where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error." Office Action (6/28/2006), pages 15-16. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to provide reliable data transmission in a transmission medium with a high bit error rate where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). <u>Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation</u>. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 6, 20, 34 and 48. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to determine if a sequence number associated with the acknowledgment is greater than an expected sequence number (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the

memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to determine if a sequence number associated with the acknowledgment is greater than an expected sequence number (missing claim limitation) be to provide reliable data transmission in a transmission medium with a high bit error rate? There are many different modifications that can be made to Gopal's invention to provide reliable data transmission. Why in particular would one skilled in the art want to modify Gopal to determine if a sequence number associated with the acknowledgment is greater than an expected sequence number? Gopal's purpose is not to provide reliable data transmission in a transmission medium with a high bit error rate. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 6, 20, 34 and 48. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 6, 20, 34 and 48. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Kawan. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48. *Id.*

> 3. <u>The Examiner's motivation for modifying Gopal with Gopal'84 to incorporate the missing claim limitations of claims 6, 20, 34 and 48 is insufficient to establish a *prima facie* case of obviousness.</u>

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach identifying the particular destination node; identifying a frame associated with the acknowledgment, as recited in claim 6 and similarly in claims 20, 34 and 48. Office Action (6/28/2006), pages 12-13. The Examiner asserts that Gopal'84 teaches the above-cited claim limitations. Office Action (6/28/2006), page 13. The Examiner's motivation for modifying Gopal with Gopal'84 to include the above-cited claim limitation is "to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error." Office Action (6/28/2006), page 14. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal

must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 6, 20, 34 and 48. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to: (1) identify the particular destination node; and (2) identify a frame associated with the acknowledgment (Examiner admits that Gopal does not teach these limitations). The Examiner's motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to (1) identify the particular destination node; and (2) identify a frame associated with the acknowledgment (missing claim limitations) be to provide reliable data transmission in a transmission medium with a high bit error rate? There are many different modifications that can be made to Gopal's invention to provide reliable data transmission. Why in particular would one skilled

in the art want to modify Gopal to (1) identify the particular destination node; and (2) identify a frame associated with the acknowledgment? The purpose of Gopal is not to improve the reliability of the data transmission in a transmission medium with a high bit error rate. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 6, 20, 34 and 48. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 6, 20, 34 and 48. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Gopal'84. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 6, 20, 34 and 48. *Id.*

    4.   The Examiner's motivation for modifying Gopal to include the missing claim limitations of claims 7, 21, 35 and 49 is insufficient to establish a *prima facie* case of obviousness.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the

nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach detecting a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number, as recited in claim 7 and similarly in claims 21, 35 and 49. Office Action (6/28/2006), page 16. The Examiner asserts that Kwan teaches the above-cited claim limitation. Office Action (6/28/2006), page 16. The Examiner's motivation for modifying Gopal with Kwan to include the above-cited claim limitation is to "to provide reliable data transmission in a transmission medium with a high bit error rate where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error." Office Action (6/28/2006), page 16. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 7, 21, 35 and 49.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to provide reliable data transmission in a transmission medium with a high bit error rate where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*,

61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 7, 21, 35 and 49. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to detect a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to detect a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number (missing claim limitations) be to provide reliable data transmission in a transmission medium with a high bit error rate? There are many different modifications that can be made to Gopal's invention to provide reliable data transmission. Why in particular would one skilled in the art want to modify Gopal to detect a lost acknowledgment if the sequence number associated with the acknowledgment is greater than the expected sequence number? The purpose of Gopal is not to improve the reliability of the data transmission in a transmission medium with a high bit error rate. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to

include the missing claim limitation of claims 7, 21, 35 and 49. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 7, 21, 35 and 49. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Kawan. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 7, 21, 35 and 49. *Id.*

E. Claims 8, 22, 36 and 50 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Gopal'84 and Bennett.

1. Gopal, Gopal'84 and Bennett, taken singly or in combination, do not teach or suggest the following claim limitations.

Applicants respectfully assert that Gopal, Gopal'84 and Bennett, taken singly or in combination, do not teach or suggest "identifying said particular destination node; identifying a frame associated with said acknowledgment; reading a data structure associated with said frame associated with said acknowledgment; indicating in an entry in said data structure associated with said particular destination node that a frame associated with said acknowledgment from said particular destination node has been received" as recited in claim 8 and similarly in claims 22, 36 and 50. The Examiner cites Figure 5 and section 3 on page 1036 of Gopal'84 as teaching the above-cited claim limitation. Office Action (6/28/2006), page 19. Applicants respectfully traverse and assert that Gopal'84 instead teaches that the "full memory go-back-n" protocol updates the ack_outstanding list different from the previously two protocols. Section 3, page 1036. Gopal'84 further teaches that upon receipt of an

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acknowledgment for a message from a receiver, that receiver is only removed from the ack outstanding list if it is not on the ack_outstanding list of any previous message. Section 3, page 1036. Gopal'84 further teaches that this extra check ensures that the messages arrive in sequence at the receivers. Section 3, page 1036. Gopal'84 further teaches that it is made necessary by the fact that the receivers generate acknowledgments for certain messages that are subsequently discarded. Section 3, page 1036. Gopal'84 further teaches that as in the previous two protocols, when the time-out counter for a message expires, the transmitter goes back and retransmits the unsuccessful message and all messages subsequent to it. Section 3, page 1036.

There is no language in the cited passage that teaches identifying a particular destination node. Neither is there any language in the cited passage that teaches identifying a frame associated with an acknowledgment. Neither is there any language in the cited passage that teaches reading a data structure associated with the frame associated with the acknowledgment. Neither is there any language in the cited passage that teaches indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Further, the Examiner states that it is inherent for Gopal to read a data structure associated with a frame associated with an acknowledgment. Office Action (6/28/2006), page 17. Applicants respectfully traverse. Gopal instead teaches that acknowledgments are sent for every message upon its acceptance as well as for the most recently accepted message. Page 2425. However, the Examiner has not presented any evidence for a person of ordinary skill in the art to conclude that sending acknowledgments necessarily concludes the teaching of reading a data structure associated with a frame associated with the acknowledgment. The Examiner must provide a basis in fact and/or technical reasoning to support that assertion that Gopal inherently teaches reading a data structure associated with a

frame associated with the acknowledgment. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that Gopal inherently teaches reading a data structure associated with a frame associated with the acknowledgment, and that it be so recognized for persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50. M.P.E.P. §2143.

Furthermore, if the Examiner is asserting that Gopal'84 inherently teaches indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received (Office Action (6/28/2006), page 17), then Applicants respectfully traverse and assert that the Examiner must provide a basis in fact and/or technical reasoning to support the assertion that Gopal'84 inherently teaches indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must make clear that Gopal'84 inherently teaches indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). Inherency, however, may not be established by probabilities or possibilities. *Id.* The mere fact that a certain thing may resolve from a given set of circumstances is not sufficient. *Id.* Therefore, the Examiner must support the inherency argument with objective evidence meeting the above requirements. Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 8, 22, 36 and 50. M.P.E.P. §2143.

Applicants further assert that Gopal, Gopal'84 and Bennett, taken singly or in combination, do not teach or suggest "identifying a previous entry associated with a frame transmitted with an implicit acknowledgment in said data structure with said

particular destination node as having been received" as recited in claim 8 and similarly in claims 22, 36 and 50. The Examiner cites Figure 5 and paragraphs 10, 47 and 60 of Bennett as teaching the above-cited claim limitation. Office Action (6/28/2006), page 20. Applicants respectfully traverse.

Bennett instead teaches that transmitted messages are temporarily stored as unacknowledged messages in a retransmission queue until the transmitted messages are acknowledged or until a time-out period associated with each of the messages has lapsed. [0010]. Bennett further teaches that to further improve the efficient use of the slow communication link, the data portion may include multiple pieces of information that may be associated with a plurality of controllers, devices, etc., which tends to maximize throughput in view of the fixed overhead associated with the IP portion and the header portion. [0047]. Bennett further teaches that because the underlying deferred acknowledgment communication protocol provides express and implicit acknowledgments for all message bundles, including message bundles containing alarm information such as the message bundles provided by an alarm server process, additional acknowledgments at the alarm management application level can be eliminated. [0069].

There is no language in the cited passages that teaches identifying a previous entry associated with a frame transmitted with an implicit acknowledgment. Neither is there any language in the cited passages that teaches identifying a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure with a particular destination node. Neither is there any language in the cited passages that teaches identifying a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure with a particular destination node as having been received. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

In response to Applicants' above argument, the Examiner states:

Bennett teaches each acknowledgment typically operates to acknowledge a plurality of messages in a message bundle and serves as the implicit acknowledgment for the message bundle. He further teaches the transmitting station requests an acknowledgment for at least one message (e.g., the last message sent) within the bundle. Therefore, the remaining messages in the bundle constitute the previous entries and the acknowledgment for the last message serves as an implicit acknowledgment. Office Action (6/28/2006), page 27.

Applicants respectfully traverse the conclusion that the remaining messages in the bundle constitute the previous entries and that the acknowledgment for the last message serves as an implicit acknowledgment. The Examiner must provide a basis in fact and/or technical reasoning to support such an interpretation. *See Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990). That is, the Examiner must provide extrinsic evidence that must make clear that such an interpretation would be recognized for persons of ordinary skill. *See In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999). Since the Examiner has not provided such evidence, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50. M.P.E.P. §2143.

Further, while claims must be given their broadest reasonable interpretation, such an interpretation must be consistent with the Specification. *Rapoport v. Dement*, 59 U.S.P.Q.2d 1215, 1220 (Fed. Cir. 2001); *In re Hyatt*, 54 U.S.P.Q.2d 1664, 1667 (Fed. Cir. 2000). The Examiner's interpretation of "identifying a previous entry" and "identifying a previous entry associated with a frame transmitted with an implicit acknowledgment" is not consistent with the Specification. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

   2. The Examiner's motivation for modifying Gopal with Bennett to include the missing claim limitation of claims 8, 22, 36 and 50 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same

problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach identifying a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure associated with the particular destination node as having been received, as recited in claim 8 and similarly in claims 22, 36 and 50. Office Action (6/28/2006), page 20. The Examiner asserts that Bennett teaches the above-cited claim limitation. Office Action (6/28/2006), page 20. The Examiner's motivation for modifying Gopal with Bennett to include the above-cited claim limitation is to "increase[ing] the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link." Office Action (6/28/2006), page 20. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness.

Gopal addresses the problem of restricting the state information maintained by a transmitter to the "active" destinations only. Page 2424, second paragraph. The Examiner's motivation ("to increase the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link") does not address as to why one of ordinary skill in the art would modify Gopal, which addresses the problem of restricting the state information maintained by a transmitter to the "active" destinations only, to identify a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure associated with the particular destination node as having been received (missing claim limitation). That is, the Examiner has not provided any objective evidence of

there being a connection between modifying Gopal to identify a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure associated with the particular destination node as having been received for the purpose of increasing the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link. In other words, why would one of ordinary skill in the art modify Gopal to identify a previous entry associated with a frame transmitted with an implicit acknowledgment in the data structure associated with the particular destination node as having been received in order to increase the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link? Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 8, 22, 36 and 50. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

> 3. <u>The Examiner's motivation for modifying Gopal with Gopal'84 to include the missing claim limitations of claims 8, 22, 36 and 50 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50.</u>

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach identifying the particular destination node; identifying a frame associated with the acknowledgment; and

indicating in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received, as recited in claim 8 and similarly in claims 22, 36 and 50. Office Action (6/28/2006), pages 18-19. The Examiner asserts that Gopal'84 teaches the above-cited claim limitations. Office Action (6/28/2006), page 18. The Examiner's motivation for modifying Gopal with Gopal'84 to include the above-cited claim limitations is "to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error. Such a goal can be achieved by the multicast source identifying the destination nodes from the acknowledgment message and being able to read a data structure indicating what was last sent." Office Action (6/28/2006), page 19. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error. Such a goal can be achieved by the multicast source identifying the destination nodes from the acknowledgment message and being able to read a data structure indicating what was last sent." Such a goal can be achieved by the multicast source identifying the destination nodes from the acknowledgment message and being able to read a data structure indicating what was last sent" as motivation for modifying Gopal to include the above-cited claim limitation. The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's

motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 8, 22, 36 and 50. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to: (1) identify the particular destination node; identifying a frame associated with the acknowledgment; and (2) indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received (Examiner admits that Gopal does not teach these limitations). The Examiner's motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error. Such a goal can be achieved by the multicast source identifying the destination nodes from the acknowledgment message and being able to read a data structure indicating what was last sent") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to (1) identify the particular destination node; identifying a frame associated with the acknowledgment; and (2) indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received (missing claim limitations) be to provide reliable

data transmission in a transmission medium with a high bit error rate? There are many different modifications that can be made to Gopal's invention to provide reliable data transmission. Why in particular would one skilled in the art want to modify Gopal to (1) identify the particular destination node; identifying a frame associated with the acknowledgment; and (2) indicate in an entry in the data structure associated with the particular destination node that a frame associated with the acknowledgment from the particular destination node has been received? The purpose of Gopal is not to improve the reliability of the data transmission in a transmission medium with a high bit error rate. Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 8, 22, 36 and 50. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 8, 22, 36 and 50. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to provide reliable data transmission in a transmission medium with a high bit error rate in a multicasting transmission system where the multicast source needs to know where an error occurs amongst the different destination it services and what data it needs to send to the destination experiencing error. Such a goal can be achieved by the multicast source identifying the destination nodes from the acknowledgment message and being able to read a data structure indicating what was last sent"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Gopal'84. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 8, 22, 36 and 50. *Id.*

F. Claims 2, 16, 30 and 44 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum and in further view of Kalkunte.

1.   <u>Claims 2, 16, 30 and 44 are patentable for at least the reasons that claims 4, 18, 32 and 46, respectively, are patentable.</u>

Claims 2, 16, 30 and 44 depend from claims 4, 18, 32 and 46, and hence claims 2, 16, 30 and 44 are patentable over Gopal in view of Tanenbaum and in further view of Kalkunte for at least the reasons that claims 4, 18, 32 and 46, respectively, are patentable over Gopal in view of Tanenbaum and in further view of Kalkunte.

2.   <u>Gopal, Tanenbaum and Kalkunte, taken singly or in combination, do not teach or suggest the following claim limitations.</u>

Applicants respectfully assert that Gopal, Tanenbaum and Kalkunte, taken singly or in combination, do not teach or suggest "inserting one or more bits in a frame header of the frame to select appropriate ports in a switch fabric to transmit the frame" as recited in claim 2 and similarly in claims 16, 30 and 44. The Examiner cites paragraphs [0011] and [0042-0046] of Kalkunte as teaching the above-cited claim limitation. Office Action (6/28/2006), page 21. Applicants respectfully traverse and assert that Kalkunte teaches an incoming data packet is received at a first port of the fabric and a first packet portion, less than a full packet length, is read to determine particular packet information. [0011]. Kalkunte further teaches that when a packet arrives at the fabric ingress with Opcode value 3, or 4, it is a multicast or IP multicast, respectively. [0044]. There is no language in the cited passages that teaches inserting one or more bits in a frame header. Neither is there any language in the cited passages that teaches inserting one or more bits in a frame header of the frame to select appropriate ports in a switch fabric. Neither is there any language in the cited passages that teaches inserting one or more bits in a frame header of the frame to select appropriate ports in a switch fabric to transmit the frame. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 2, 16, 30 and 44, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

3.   <u>The Examiner's motivation for modifying Gopal with Kalkunte to include the missing claim limitations of claims 2, 16, 30 and</u>

44 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 2, 16, 30 and 44.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the Examiner must provide particular findings related thereto. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach "inserting one or more bits in a frame header of the frame to select appropriate ports in a switch fabric to transmit the frame" as recited in claim 2 and similarly in claims 16, 30 and 44. Office Action (6/28/2006), page 21. The Examiner asserts that Kalkunte teaches the above-cited claim limitation. *Id.* The Examiner's motivation for modifying Gopal with Kalkunte to include the above-cited claim limitations is "to specify a switch port to provide self-routing capability and contribute[s] to increasing the throughput and operational speed of a network involved in forwarding different types of data including multicast frames." Office Action (6/28/2006), page 21. The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 2, 16, 30 and 44.

The Examiner has not provided a source for his motivation for modifying Gopal to include the above-cited claim limitation. The Examiner simply states "to specify a switch port to provide self-routing capability and contribute[s] to increasing the throughput and operational speed of a network involved in forwarding different types of data including multicast frames." The motivation to modify Gopal must come from one of three possible sources: the nature of the problem to be solved, the

teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1457-48 (Fed. Cir. 1998). Applicants respectfully request the Examiner to point out which of these sources is the source of the Examiner's motivation. The Examiner has not provided any evidence that his motivation comes from any of these sources. Instead, the Examiner is relying upon his own subjective opinion which is insufficient to support a *prima facie* case of obviousness. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002). Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 2, 16, 30 and 44. *Id.*

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to insert one or more bits in a frame header of the frame to select appropriate ports in a switch fabric to transmit the frame (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation ("to specify a switch port to provide self-routing capability and contribute[s] to increasing the throughput and operational speed of a network involved in forwarding different types of data including multicast frames") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to insert one or more bits in a frame header of the frame to select appropriate ports in a switch fabric to transmit the frame (missing claim limitation) be to specify a switch port to provide self-routing capability thereby increasing the throughput and operational speed of a network? Furthermore, the Examiner has not explained any rationale connection between inserting bits in a frame header of the frame to select appropriate ports in a switch fabric to transmit the frame (missing claim limitation) and increasing the throughput and operational speed

of a network (Examiner's motivation). Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 2, 16, 30 and 44. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 2, 16, 30 and 44. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("to specify a switch port to provide self-routing capability and contribute[s] to increasing the throughput and operational speed of a network involved in forwarding different types of data including multicast frames"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Kalkunte. However, the mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 2, 16, 30 and 44. *Id.*

      G.   <u>Claims 3, 17, 31 and 45 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Gopal in view of Tanenbaum and Kalkunte and in further view of Bennett.</u>

          1.   <u>Claims 3, 17, 31 and 45 are patentable for at least the reasons that claims 2, 16, 31 and 45, respectively, are patentable.</u>

Claims 3, 17, 31 and 45 depend from claims 2, 16, 31 and 45, and hence claims 3, 17, 31 and 45 are patentable over Gopal in view of Tanenbaum and in further view of Kalkunte for at least the reasons that claims 2, 16, 31 and 45, respectively, are patentable over Gopal in view of Tanenbaum and in further view of Kalkunte.

          2.   <u>Gopal, Tanenbaum and Kalkunte, taken singly or in combination, do not teach or suggest the following claim limitations.</u>

Applicants respectfully assert that Gopal, Tanenbaum and Kalkunte, taken singly or in combination, do not teach or suggest "setting a bit in said frame header of said frame to indicate an explicit or an implicit acknowledgment" as recited in claim 3 and similarly in claims 17, 31 and 45. The Examiner cites paragraphs [0010], [0047], [0067] and Figure 5 of Bennett as teaching the above-cited claim limitation. Office Action (6/28/2006), page 22. Applicants respectfully traverse and assert that Bennett instead teaches storing messages to be transmitted in a pending message queue and applying a dynamic window to the pending message queue to define a message bundle to be sent through the slow communication link. [0010]. Bennett further teaches that to improve the efficient use of the slow communications link 16, the data portion 206 may include multiple pieces of information that may be associated with a plurality of controllers, devices, etc. [0047]. There is no language in the cited passages that teaches setting a bit in a frame header of a frame. Neither is there any language in the cited passages that teaches setting a bit in a frame header of a frame to indicate an explicit or an implicit acknowledgment. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 3, 17, 31 and 45, since the Examiner is relying upon incorrect, factual predicates in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

      3.   The Examiner's motivation for modifying Gopal with Bennett to include the missing claim limitations of claims 3, 17, 31 and 45 is insufficient to establish a *prima facie* case of obviousness in rejecting claims 3, 17, 31 and 45.

As stated above, in order to establish a *prima facie* case of obviousness, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998). That is, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some case, the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). Whether the Examiner relies on an express or an implicit showing, the

Examiner must provide particular findings related thereto. *In re Kotzab,* 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

The Examiner admits that Gopal does not teach "setting a bit in said frame header of said frame to indicate an explicit or an implicit acknowledgment" as recited in claim 3 and similarly in claims 17, 31 and 45. Office Action (6/28/2006), page 22. The Examiner asserts that Bennett teaches the above-cited claim limitation. *Id.* The Examiner's motivation for modifying Gopal with Bennett to include the above-cited claim limitations is "increasing the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link as indicated in the last line of Gopal's paragraph 8." Office Action (6/28/2006), page 23. The Examiner further states that "Gopal's system is also focused in minimizing the idle time of the communication channel by only communicating with active destinations as indicated on page 2425, 1st column, in lines 42-47." *Id.* The Examiner's motivation is insufficient to establish a *prima facie* case of obviousness in rejecting claims 3, 17, 31 and 45.

As stated above, the Examiner cites lines 42-47 on page 2425 of Gopal as well as paragraph 8 of Gopal as support for the Examiner's motivation. Gopal teaches that for the example used previously, the first message in the resulting MDP would have been designated the sequence number A-1 B-1 C-1, the second would have A-2 B-2 D-1, and the third, B-3 C-2 E-1. 1st column, lines 42-45, page 2425. Gopal further teaches that in this variation the transmitter uses a single counter per destination but maintains these only for active destinations. 1st column, lines 45-47, page 2425. Hence, Gopal teaches that the transmitter maintains a single counter per destination only for those active destinations. Gopal does not maintain a single counter per destination only for those active destinations to reduce idle time of the communication channel (no language to support such an assertion). Instead, Gopal is focused on reducing memory requirements. See Abstract. There is no language in Gopal (including paragraph 8) to support the assertion that Gopal is focused on minimizing the idle time of the communication channel by only communicating with active destinations. As a result, the Examiner's cited passages do not provide reasons

that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 3, 17, 31 and 45. Accordingly, the Examiner has not presented a *prima facie* case of obviousness for rejecting claims 3, 17, 31 and 45. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Further, Gopal addresses the problem of adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source. Abstract. The Examiner has not provided any reasons as to why one skilled in the art would modify Gopal, which teaches adapting protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to set a bit in the frame header of the frame to indicate an explicit or an implicit acknowledgment (Examiner admits that Gopal does not teach this limitation). The Examiner's motivation ("to increase the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link ") does not provide such reasoning. Why would the reason to modify Gopal, whose purpose is adapt protocols so that the memory requirement does not grow with the total destination population but depends upon the number of destinations actually in communication with the source, to set a bit in the frame header of the frame to indicate an explicit or an implicit acknowledgment (missing claim limitation) be to increase the throughput by minimizing the idle time of the communication link? Furthermore, the Examiner has not explained any rationale connection between setting a bit in the frame header of the frame to indicate an explicit or an implicit acknowledgment (missing claim limitation) and increasing the throughput by minimizing the idle time of the communication link (Examiner's motivation). Hence, the Examiner's motivation does not provide reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would modify Gopal to include the missing claim limitation of claims 3, 17, 31 and 45. Accordingly, the Examiner has not presented a *prima facie*

case of obviousness for rejecting claims 3, 17, 31 and 45. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1458 (Fed. Cir. 1998).

Furthermore, based on the Examiner's stated motivation ("increasing the throughput by minimizing the idle time of the communication link in decreasing the amount of acknowledgment messages sent over the link as indicated in the last line of Gopal's paragraph 8"), the Examiner appears to be in essence asserting that since the references can be combined that it would have been obvious to combine Gopal with Bennett. However, the mere fact that references <u>can</u> be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. §2143.01. Hence, the Examiner's stated motivation is insufficient to support a *prima facie* case of obviousness in rejecting claims 3, 17, 31 and 45. *Id.*

III.   CONCLUSION:

As a result of the foregoing, it is asserted by Applicants that claims 2-4, 6-14, 16-18, 20-28, 30-32, 34-42, 44-46 and 48-54 in the Application are in condition for allowance, and Applicants respectfully request an allowance of such claims. Applicants respectfully request that the Examiner call Applicants' attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining issues.
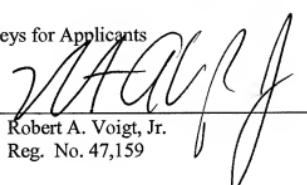
Respectfully submitted,

WINSTEAD SECHREST & MINICK P.C.

Attorneys for Applicants

By:_____

Robert A. Voigt, Jr.
Reg. No. 47,159

P.O. Box 50784
Dallas, TX 75201
(512) 370-2832

Austin_1 323753v.1